

Title (en)

IMPROVED PRODUCTION OF POLY-BETA-HYDROXYALKANOATES IN TRANSFORMED PROKARYOTIC HOSTS

Title (de)

VERBESSERTE PRODUKTION VON POLY-BETA-HYDROXYALKANOATEN IN TRANSFORMIERTEN PROKARYOTISCHEN WIRTEN

Title (fr)

PRODUCTION AMELIOREE DE POLY--g(b)-HYDROXYALCANOATES DANS DES H TES PROCARYOTES TRANSFORMES

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9521257A1] Vector construct providing for inducible overproduction of poly- beta -hydroxyalkanoate ("PHA"), including poly- beta -hydroxybutyrate (PHB), in prokaryotes, including Escherichia coli in particular. The vector constructs provide for one or more of (a) regulated transcription of the phb operon, thereby providing numerous copies of mRNA suitable for production of PHA, (b) multiple copies of the vector construct upon heat induction, thereby providing numerous copies of the phb operon for production of PHA and (c) an altered phb operon wherein the phbC Shine-Dalgarno sequence, or ribosome binding site, is replaced with a consensus Shine-Dalgarno sequence, such as the lac Shine-Dalgarno sequence. Further, the vector constructs may include a stabilization locus. Also, methods of producing PHA from such high production vector constructs, including methods wherein PHA is produced without addition of a chemical inducer such as IPTG or an antibiotic, bacterial host cells transformed with such vector constructs, and PHA produced according to the methods of the present invention.

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